## (19) World Intellectual Property Organization International Bureau



(43) International Publication Date 31 October 2002 (31.10.2002)

**PCT** 

## (10) International Publication Number WO 02/085226 A1

(51) International Patent Classification:

\_\_\_\_

A61B 17/70

- (21) International Application Number: PCT/US02/12772
- (22) International Filing Date: 4 April 2002 (04.04.2002)
- (25) Filing Language:

English

(26) Publication Language:

English

- (30) Priority Data: 60/381,579
- 4 April 2001 (04.04.2001) US
- (71) Applicant and
- (72) Inventor: RAPP, Lawrence, G. [US/US]; 7650 Dixie Highway, #140, Clarkston, MI 48346 (US).
- (74) Agents: ROHM, Benita, J. et al.; Rohm & Monsanto,
   P.L.C., Suite 1525, 660 Woodward Avenue, Detroit, MI
   48226 (US).

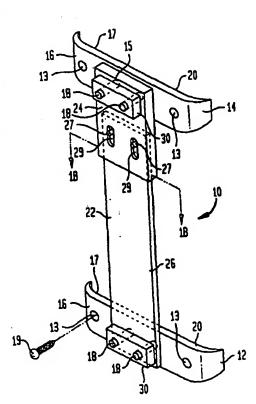
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PI, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

[Continued on next page]

(54) Title: MOBILE SLEEVE STRUCTURE FOR MAINTAINING SPATIAL RELATIONSHIP BETWEEN VERTEBRAE



(57) Abstract: An arrangement and method of use for supporting a plurality of vertebrae in a cervical column in predetermined spatial relation and for facilitating a spinal fusion procedure. A plurality of templates (12, 14) couple to respectively associated vertebrae at anterior lateral surfaces thereof. Such coupling is effected with fasterners, such as bone screws (19). The templates are slidingly coupled to each other by a coupler assembly (22) whereby they are displaceable along a path over a limited distance that is substantially parallel to the longitudinal axis of the cervical column. The sliding displacement between the templates is limited by a pair of protruding tongues (27) that extend through clongated apertures (29). The clongated dimension of the apertures determines the extent of sliding travel, which extent is established to accommodate subsidence of the bone fusion and to prevent separation of the sliding elements of the coupler assembly. The coupler assembly is coupled to each template by engagement between posts (18) and post holes (15). Additionally, locking plates and fasteners, such as threaded fasteners, are used to ensure the security of the engagement between the templates and the coupler assembly. Sequential replication of the arrangement enables three or more vertebrae to be supported in the determined spatial relation.

WO 02/085226 A1